Trimble TX8 Laser Scanner

Key Features

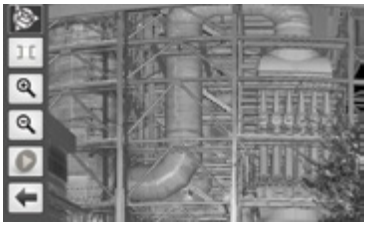
Increase field productivity with the fastest, high resolution scans on the market

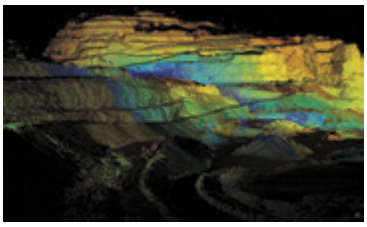
Confidence in **data accuracy, clarity and richness**

True performance in real world environments

Intuitive and easy to operate

Data integrates with Trimble survey instruments and Trimble Realworks software





The Trimble® TX8 laser scanner sets new standards for performance and ease of use in high-speed collection of 3D data. Using a state-of-the-art blend of speed, long range and precision, the Trimble TX8 delivers high quality results in industrial measurement, engineering, construction, forensics and other applications that require high levels of accuracy and flexibility.

A REVOLUTION IN 3D SCANNING

The Trimble TX8 combines speed and range to reduce the time and effort for 3D scanning. The Trimble TX8 lets you gather data more quickly from each setup while the scanner's long range reduces the number of setups needed to do the job. As a result, you'll finish your projects faster and with the confidence that your data is complete and accurate.

Using Trimble's patented Lightning™ technology, the Trimble TX8 can measure one million points per second while capturing precise data over its full measurement range. Because Trimble Lightning technology is less susceptible to variation in surface types and atmospheric conditions, you can capture complete datasets from each station.

The Trimble TX8 streamlines work in the office as well. The scanner's clean, low-noise data results in less time for processing. Data from the Trimble TX8 loads directly into Trimble RealWorks® and Trimble Scan Explorer software. The Trimble TX8 paired with Trimble RealWorks also provides efficient dataflow into popular CAD programs.

High Performance for Demanding Applications

The Trimble TX8 is ideal for capturing detailed data on existing conditions. Making high-speed measurements without compromising range or precision, the Trimble TX8 delivers high-density 3D point clouds needed by design and analysis professionals.

The Trimble TX8 provides a 360 degree x317 degree field of view and captures data at one million points per second with a typical scan time of only 3 minutes. The Trimble TX8 maintains its high precision over its entire range of 120 m and is available with an optional upgrade extending the range to an impressive 340 m.

Rugged, Flexible and Easy to Use

A color touchscreen display and one-button scanning make data capture easy and efficient. The intuitive onboard software lets you quickly manage scan resolution and define scan areas. Because you capture only the data you need, you'll save time in the field and office.

Benefit from the flexibility to operate in demanding environments and situations. With its eye-safe Class 1 non-visible laser, the Trimble TX8 is safe to use even in busy public places. The Trimble TX8 features a rugged design, IP54 environmental rating, protected mirror and ability to capture data in bright sunlight.

Designed for mobility, the Trimble TX8 weighs just 11 kg and is powered by lightweight, long-life lithium ion batteries. The wheeled transportation case conforms to requirements of most airlines for checked luggage which allows you to easily transport the Trimble TX8 between job locations.

THE TOTAL SOLUTION

The Trimble TX8 is designed for a broad array of uses and environments. Typical applications include:

- Plant and industrial measurement
- Civil engineering
- Surveying
- Mining and quarries
- Building and commercial construction
- Architecture and design
- Preservation and restoration
- Deformation monitoring
- Quality control
- Accident investigation

With the Trimble TX8's ability to capture precise high-density 3D data combined with Trimble RealWorks software advanced modeling, analysis, and data management tools, the Trimble TX8 laser scanner is the complete scanning solution for Geospatial professionals.

Trimble

Trimble TX8 Laser Scanner

PERFORMANCE

Overview

Scanning principle . . . . . Vertically rotating mirror on horizontally rotating base
Range principle. . . . . Ultra-high speed time-of-flight powered by Trimble Lightning™ technology
Scanning Speed . . . . . 1 million pts/sec
Maximum range. . . . . 120 m on most surfaces
340 m with optional upgrade
Range noise . . . . . <2 mm on most surfaces with Standard scan modes
<1 mm with High Precision scan mode[2]

Range measurement

Laser class . . . . . 1, eye safe in accordance with IEC EN60825-1
Laser wavelength . . . . . 1.5 µm, invisible
Laser beam diameter . . . . . 6–10–34 mm @ 10–30–100m
Minimum range . . . . . 0.6 m
Max. standard range . . . . . 120 m on 18–90% reflectivity
100 m on very low reflectivity (5%)
Extended range[1]. . . . . 340 m
Range noise . . . . . <2 mm from 2 m to 120 m on 18–90% reflectivity in Standard modes
<1 mm from 2 m to 80 m on 18–90% reflectivity in High Precision mode[2]
Range systematic error . . . . . <2 mm

Scanning

Field of view. . . . . 360°x317°
Angular accuracy . . . . . 80 µrad

Scan Parameters	Level 1	Level 2	Level 3	Extended[1]
Max range	120 m	120 m	120 m	340 m
Scan duration (minutes)[3]	02:00	03:00	10:00	20:00
Point spacing at 30 m	22.6 mm	11.3 mm	5.7 mm	———
Point spacing at 300 m	———	———	———	75.4 mm
Mirror rotating speed	60 rps	60 rps	30 rps	16 rps
Number of points	34 Mpts	138 Mpts	555 Mpts	312 Mpts

OTHERS

Luminance resolution . . . . . 8 bits
Leveling . . . . . External bubble, onboard electronic bubble
Dual axis compensation . . . . . Selectable on/off
Resolution. . . . . 0.3″
Range . . . . . ±10′
Accuracy . . . . . 0.5″
Data storage. . . . . USB 3.0 Flash Drive
Remote Control . . . . . Operate with Windows 7 or higher PC or tablet via USB connection[4]
Color acquisition . . . . . External camera kits available for high resolution and HDR images

PHYSICAL

Dimensions. . . . . 335 mm W x 386 mm H x 242 mm D
(13.2 in W x 15.2 in H x 9.5 in D)
Weight . . . . . 10.6 kg (23.3 lb) with tribrach and no battery;
11.0 kg (24.3 lb) with tribrach and battery
Power supply . . . . . 76 mm W x 43 mm H x 130 mm D
(3.0 in W x 1.7 in H x 5.1 in D);
Weight: 0.66 kg (1.46 lb)
Battery Dimensions. . . . . 89.2 mm W x 20.1mm H x 149.1 mm D
(5 13/16 in W x 3 ½ in H x ¾ in D);
Battery Weight . . . . . 0.46 kg (1 lb)

Power consumption . . . . . 72 W
Scan time per battery . . . . . >2 hours
Instrument case . . . . . 500 mm W x 366 mm H x 625 mm D
(19.7 in W x 14.4 in H x 24.6 in D)

ENVIRONMENTAL

Operating temperature range
(non-condensing atmosphere) . . . . . –0 °C to +40 °C (32 °F to 104 °F)
Storage Temperature . . . . . –20 °C to +50 °C (–4 °F to 122 °F)
Operating Humidity Range. . . . . Non Condensing
Lighting conditions. . . . . All indoor & outdoor conditions over entire range (no lighting limitations)
Protection Class IP54

Images courtesy of le FabShop

1 Optional upgrade increases range to 340 m.
2 Scan duration time is longer with High Precision scan mode.
3 Scan duration times for Standard scan modes.
4 Remote control requires optional Trimble TX8 USB cable PN 23704034.

CLASS 1
LASER PRODUCT

Specifications subject to change without notice.

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